

REMARKS

The present amendment is intended to be fully responsive to all points of rejection raised by the Examiner in the Official Action mailed on September 29, 2003, and is believed to place the application in condition for allowance.

Claims 1 – 8 are pending in the application. Claims 9 – 33, which are directed to non-elected inventions, are presently cancelled without prejudice or disclaimer.

Claims 1- 3 are currently amended.

No new matter has been added. Support for the amendments can be found, *inter alia*, at Figs. 30A – 30C and 32A and 32B; and at page 75, section entitled “CEL to Vector Comparison”, et seq. of the written description.

Favorable reconsideration and allowance of all claims under consideration is respectfully requested.

Claims Rejections – 35 U.S.C. § 102(b) – Jacques (FR 2,687,091)

Claims 1 and 2 stand rejected under 35 U.S.C. 102(b) as being anticipated by Jacques (FR 2,687,091). Applicants respectfully traverse the above rejection as applied to each rejected claim.

Jacques (FR 2,687,091) describes a process for computer assisted inspection of cutouts made in a tape by a cutout machine. The inspection method includes extracting contours (boundaries) defining the cutouts and making a polygonal approximation of the cutout. Segments of the polygonal approximation are vectorized, and the series of angles between successive segments are compared with corresponding angles in a theoretical cutout to detect defective cutouts.

Claim 1 has been amended and now includes the following distinguishing recitation:

creating a reference image for a representative object, said reference image comprising an at least partially vectorized first representation of boundaries representing said representative object;
acquiring an image of an object under inspection comprising a second representation of boundaries representing said object under inspection; and
comparing a location of at least some boundaries in the second representation of boundaries to a location of corresponding boundaries in said at least partially vectorized first representation of boundaries, thereby to identify defects.

As noted above, Jacques (FR 2,687,091) describes a process for computer assisted inspection of cutouts by comparing the series of angles between successive segments in polygonal representation of a cutout to corresponding angles in a polygonal representation of a theoretical cutout. Jacques (FR 2,687,091) fails to show or suggest comparing a location of at least some boundaries in a representation of boundaries in an object to be inspected to a location of corresponding boundaries in an at least partially vectorized representation of boundaries in a reference object.

In view of the foregoing, Applicants respectfully submit that claim 1, as amended, is patentable over Jacques. Furthermore, Applicants find in Jacques no teaching or suggestion that would have enabled the person of ordinary skill to achieve the subject matter of claim 1, as now amended. Applicants, therefore, respectfully request that the Examiner withdraw this rejection of claim 1.

Claim 2 depends from claim 1 and includes additional distinguishing recitation. Claim 2 has been amended to delete the word "step". Inasmuch as claim 1, as amended, is deemed

patentable over Jacques (FR 2,687,091), Applicants respectfully submit that claim 1 is also patentable over Jacques (FR 2,687,091). Applicants respectfully request that the Examiner withdraw this rejection of claim 2.

Claims Rejections – 35 U.S.C. § 103(a) – Jacques and Aloni

Claims 3 – 8 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Jacques (FR 2,687,091) in view of Aloni (U.S. 5,619,429). Applicants respectfully traverse the above rejection as applied to each rejected claim.

Jacques (FR 2,687,091) describes a process for computer assisted inspection of cutouts made in a tape by a cutout machine. The inspection method includes extracting contours (boundaries) defining the cutouts and making a polygonal approximation of the cutout. Segments of the polygonal approximation are vectorized, and the series of angles between successive segments are compared with corresponding angles in a theoretical cutout to detect defective cutouts.

Aloni describes apparatus and a method for inspection of a patterned object by comparison of the object to a reference. The apparatus and method include hardware defect detection and software postprocessing.

Claim 3 has been amended and now includes the following distinguishing recitation:

a boundary identifier operative to generate a representation of boundaries of known elements in the image;

a hardware candidate defect identifier operative to identify at least some candidate defects in the image, in hardware; and

a software candidate defect inspector receiving an output from the hardware candidate defect identifier and analyzing a location of boundaries in said

representation of boundaries to identify at least one false alarm within said output, in software.

As noted above, Jacques (FR 2,687,091) describes a process for computer assisted inspection of cutouts by comparing the series of angles between successive segments in polygonal representation of a cutout to corresponding angles in a polygonal representation of a theoretical cutout. Jacques (FR 2,687,091) fails to show or suggest analyzing a location of boundaries in the representation of boundaries of an object to be inspected to identify at least one false alarm. Applicants respectfully submit that Aloni fails to show or suggest subject matter missing from Jacques (FR 2,687,091) that renders claim 1 unpatentable.

In view of the foregoing, Applicants respectfully submit that claim 3, as amended, is patentable over Jacques in view of Aloni. Furthermore, Applicants find in the combination of Jacques and Aloni no teaching or suggestion that would have enabled a person of ordinary skill to achieve the subject matter of claim 3, as now amended. Applicants, therefore, respectfully request that the Examiner withdraw this rejection of claim 3.

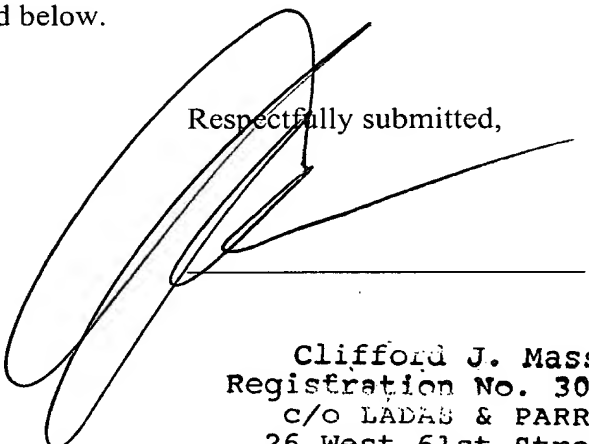
Inasmuch as claim 3, as amended, is deemed patentable, Applicants respectfully submit that claims 4 – 8 are also patentable over Jacques (FR 2,687,091) in view of Aloni. Applicants respectfully request that the Examiner withdraw this rejection of claims 4 - 8.

Conclusion and Request for Interview

In view of the foregoing, this application is believed to be in order. Reconsideration and allowance of this application are respectfully solicited.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

A large, stylized handwritten signature in dark ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

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